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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,276	07/12/2000	Wolfgang Theimer	473-009548-US(PAR)	2128

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FAIRFIELD, CT 06824

EXAMINER

WOO, ISAAC M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,276

Applicant(s)

THEIMER ET AL.

Examiner

Isaac M Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 and 10-18 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 8-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 and 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 May 2003, has been entered.

2. Claim 18 is currently amended and 2-4, 7, 10-12, 14, 16-17 are previously amended. Claims 1 and 8-9 are canceled. And claims 2-7 and 10-18 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7 and 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meador, III et al (U.S. Patent No. 5,638,425, hereinafter, "Meador") in view of McNutt et al (U.S. Patent No. 5,649,153, hereinafter, "McNutt").

With respect to claim 18, Meador discloses the method for inputting data into system comprising, in response to an input by a user identifying one or more terms, which are appropriate as possible for this input based on confidence value (102, FIG. 5), see (col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12);

determining data records that match the identified terms, see (102, FIG. 5, col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12);

calculating an overall probability (joint probability) from the confidence value of the identified term (102, FIG. 5, col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12) and the probability value of the matching data record, see (108, FIG. 5, col. 10, lines 60-67 to col. 11, lines 1-67 to col. 12, lines 1-19);

processing the identified terms according to the overall probability (joint probability), see (FIG. 8, col. 8, lines 55-67 to col. 9, lines 1-12, col. 10, lines 60-67 to col. 11, lines 1-67 to col. 12, lines 1-19). And for the limitations of during a certain period in the recent past to during this certain period to calculate ratio has no factor to decide the ratio because the whole limitations are represented as mathematical form that is, $((\text{number of times this data record} / \text{certain period in the recent past}) / (\text{total number of times this data record} / \text{this certain period}))$. The time factors can be canceled to get the ratio of this equation. Meador discloses the probability (108, FIG. 5, col. 10, lines 60-67 to col. 11, lines 1-67 to col. 12, lines 1-19). Meador does not disclose the probability calculated as ratios of number of times used this data record has been used to the total number of time used all the data records have been used. However, McNutt discloses

the equation, that is, $\frac{\text{first-record-hit} + \text{other-record-hit}}{\text{total-of-all-event}}$, which teaches that the nominator is the number of records used, and denominator is the total number of records used. Therefore, it would have been obvious a person having ordinary skill in the art the time invention was made to combine the ratios of number of times used this data record has been used to the total number of time used all the data records have been used of the system of McNutt with the system of Meador to calculate the ratio. Because the number of ratio for the data used to total numbers of used can produce for the data probability that could be used again. The data with high ratio (probability) can show that the data can be used with high probability for later usage.

With respect to claim 2, Meador discloses the confidence value a value from an interval between number, preferably 1, corresponding to reliable identification, and that for an input which can not be identified, corresponding to 0, including these values, see (FIG. 10A-B, col. 11, lines 42-67 to col. 12, lines 1-19).

With respect to claim 3, Meador discloses the identified terms are announced and/or displayed to a user as a system response, starting with the term identified as being the most reliable, on the basis of their overall probability (confidence value), see (102, FIG. 5, col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12).

With respect to claim 4, Meador discloses each identified term, those data records which are appropriate for the identified terms are looked for in a list of stored

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data records, see (102, FIG. 5, col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12).

With respect to claim 5, Meador discloses when data being input, the input is completed by a data record appropriate for the identified term, using a form-based dialogue structure, see (FIG. 5, col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12).

With respect to claim 6, Meador discloses that the data input is completed in response to a request signal, see (col. 11, lines 11-34).

With respect to claim 7, Meador discloses that the number of data records found can be reduced by inputting one or more further terms, see (col. 3, lines 9-35, FIG. 4, FIG. 5, col. 8, lines 55-67 to col. 9, lines 1-12).

With respect to claim 10, Meador discloses that an announcement/display sequence of the data record is defined as a function of their overall probability (confidence value), see (joint probability, FIG. 4, FIG. 5, col. 11, lines 20-67 to col. 12, lines 1-19).

With respect to claim 11, Meador discloses that the identified terms are announced and/or displayed individually and successively, or as a selection list for confirmation or selection, see (FIG. 4, FIG. 5, col. 11, lines 20-67 to col. 12, lines 1-19).

With respect to claim 12, Meador discloses if the input is a voice input, the confidence value is established in the normal manner for voice recognition, see (col. 12, lines 20-36).

With respect to claim 13, Meador discloses that the voice input by a user is first of all subjected to speaker identification, and in that the subsequent voice recognition process is carried out taking account of the result of the speaker identification, see (col. 1, lines 41-57).

With respect to claim 14, Meador discloses that the input is made via an alphanumeric input device, with the terms entered in this way first of all being assigned the confidence value for reliable identification, see (FIG. 4, FIG. 5, col. 11, lines 20-67 to col. 12, lines 1-19).

With respect to claim 15, Meador discloses that the incorrectly alphanumerically input term, which has already frequently been input incorrectly in a manner specific to a particular user, is assigned a lower confidence value as a function of input-specific error statistics, see (col. 21, lines 12-60).

With respect to claim 16, Meador discloses that the incorrectly alphanumerically input term, which has already frequently been input incorrectly in a manner specific to a particular user, is automatically corrected, with corrected term being assigned a confidence value which is lower than the confidence value for reliable identification, see (col. 21, lines 12-60).

With respect to claim 17, Meador discloses that the input is image input, see (col. 8, lines 55-67 to col. 9, lines 1-12).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alleva et al (U.S. Patent No. 5,710,866) discloses the system for recognizing an input speech utterance compares the input speech utterance to a plurality of hidden Markov models to obtain a constrained acoustic score that reflects the probability that the hidden Markov model matches the input speech utterance. The method computes a confidence measure for each hidden Markov model that reflects the probability of the constrained acoustic score being correct. The computed confidence measure is then used to adjust the constrained acoustic score. Preferably, the confidence measure is computed based on a difference between the constrained acoustic score and an

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unconstrained acoustic score that is computed independently of any language context.


In addition, a new confidence measure preferably is computed for each input speech frame from the input speech utterance so that the constrained acoustic score is adjusted for each input speech frame.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

IMW
June 26, 2003


JEAN M. CORRIELUS
PRIMARY EXAMINER